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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/559,492	04/05/2007	Wolfgang Ziegler	026032-4983	8700

22428 7590 03/02/2010
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EXAMINER

SMITH, RICHARD A

ART UNIT	PAPER NUMBER
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2841

MAIL DATE	DELIVERY MODE
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03/02/2010

PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No. 10/559,492	Applicant(s) ZIEGLER ET AL.	
	Examiner R. Alexander Smith	Art Unit 2841	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 13-32 is/are pending in the application.
 4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) ____ is/are allowed.
- 6) ☒ Claim(s) 13-15, 25, 26 and 29-31 is/are rejected.
- 7) ☒ Claim(s) 16-24, 27, 28 and 32 is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on N/A is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.
 Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
 Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
 a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. ____.
 3. ☒ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. ____. |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date <u>20051205</u> . | 6) <input type="checkbox"/> Other: ____. |

DETAILED ACTION

Drawings

1. The subject matter of this application admits of illustration by a drawing to facilitate understanding of the invention. Applicant is required to furnish a drawing under 37 CFR 1.81(c). No new matter may be introduced in the required drawing. Each drawing sheet submitted after the filing date of an application must be labeled in the top margin as either "Replacement Sheet" or "New Sheet" pursuant to 37 CFR 1.121(d).
2. Since there are no drawings submitted with this application, the following is based on figures 1 and 2 provided in PCT EP2004 006050 as filed on April 5, 2007.
3. The drawings are objected to under 37 CFR 1.83(a). The drawings must show every feature of the invention specified in the claims. Therefore, the following must be shown or the feature(s) canceled from the claim(s). No new matter should be entered.
 - (a) The sensor system and the establishment of the position in claims 18 and 25.
 - (b) The electrically conductive track and the current collector in claims 19 and 26.
 - (c) The measuring bridge of claim 21.
 - (d) The limitations of claims 22, 23, 30, and lines 8-12 of claim 29.

Corrected drawing sheets in compliance with 37 CFR 1.121(d) are required in reply to the Office action to avoid abandonment of the application. Any amended replacement drawing sheet should include all of the figures appearing on the immediate prior version of the sheet,

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even if only one figure is being amended. The figure or figure number of an amended drawing should not be labeled as "amended." If a drawing figure is to be canceled, the appropriate figure must be removed from the replacement sheet, and where necessary, the remaining figures must be renumbered and appropriate changes made to the brief description of the several views of the drawings for consistency. Additional replacement sheets may be necessary to show the renumbering of the remaining figures. Each drawing sheet submitted after the filing date of an application must be labeled in the top margin as either "Replacement Sheet" or "New Sheet" pursuant to 37 CFR 1.121(d). If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

Claim Objections

4. Claims 13-32 are objected to because of the following informalities:

For each claim 13, 25 and 29 although the preamble is generally not given patentable weight, the phrase "in particular for use in motor-vehicle dashboards" is confusing since it is not clear if this should be considered or not.

Claim 17: "a drive part" in line 2 does not properly refer to its antecedent in claim 16.

Claim 28: "a drive part" in line 2 does not properly refer to its antecedent in claim 27.

Claim 32: "a drive part" in line 5 does not properly refer to its antecedent in line 2.

Claim Rejections - 35 USC § 102

5. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless --

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

6. Claims 13-15 are rejected under 35 U.S.C. 102(b) as being anticipated by FR 2,790,552 to Besnard et al.

Besnard et al. discloses an analog display instrument, in particular for use in motor-vehicle dashboards, comprising:

Claim 13, an indicator configured to move in front of a scale (figure 1 and page 1 lines 3-6); a guide (10) in the form of one of a straight line and a curve (figures 1, 2, 5 or 8); and an electrically controllable drive (30) configured to move the indicator along the guide (via toothed rack 20); wherein the indicator is movable linearly along the guide in forward and backwards directions by the electrically controllable drive (abstract).

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Claim 14, wherein the indicator is arranged on a slide (the walls of guide 10 are slides and/or the shoes 311 are slides) which is positively guided along the guide (via toothed rack 20) and wherein the indicator can be moved directly by the drive which is seated on the slide

Claim 15, wherein the drive is a linear drive (via the stepping motor).

7. Claim 25 is rejected under 35 U.S.C. 102(b) as being anticipated by JP 55-60682 to Noguchi.

Noguchi discloses an analog display instrument, comprising: an indicator (3) configured to move in front of a scale (1); a guide (2) in the form of one of a straight line and a curve; and an electrically controllable drive (37, 38, etc. as shown in figure 2) configured to move the indicator along the guide; wherein the indicator is movable linearly along the guide in forward and backwards directions by the electrically controllable drive; wherein the indicator is arranged on a slide (in a broad sense, rail 2 and conductors 21 and 22 are a slide although the indicator itself is wheel driven) which is positively guided along the guide and the indicator can be moved directly by the drive which is seated on the slide; and wherein the position of one of the slide and the indicator in relation to the guide and therefore in relation to the scale can be established using a sensor system (the sensor system being by means 41 and 42 in figure 1, or by means 51 and 52 in figure 5, see abstract).

The Applicant should note that the preamble is generally not accorded any patentable weight where it merely recites the purpose of a process or the intended use of a structure, and where the body of the claim does not depend on the preamble for completeness but, instead, the

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process steps or structural limitations are able to stand alone. See In re Hirao, 535 F.2d 67, 190 USPQ 15 (CCPA 1976) and Kropa v. Robie, 187 F.2d 150, 152, 88 USPQ 478, 481 (CCPA 1951).

Claim Rejections - 35 USC § 103

8. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(f) or (g) prior art under 35 U.S.C. 103(a).

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9. Claims 25, 26 and 29 are rejected under 35 U.S.C. 103(a) as being unpatentable over FR 2,790,552 to Besnard et al. in view of JP 55-60682 to Noguchi.

Besnard et al. discloses an analog display instrument, in particular for use in motor-vehicle dashboards, comprising:

An indicator configured to move in front of a scale (figure 1 and page 1 lines 3-6); a guide (10) in the form of one of a straight line and a curve (figures 1, 2, 5 or 8); and an electrically controllable drive (30) configured to move the indicator along the guide (via toothed rack 20); wherein the indicator is movable linearly along the guide in forward and backwards directions by the electrically controllable drive (abstract).

wherein the indicator is arranged on a slide (the walls of guide 10 are slides and/or the shoes 311 are slides) which is positively guided along the guide (via toothed rack 20) wherein the indicator can be moved directly by the drive which is seated on the slide.

Besnard does not disclose:

In claim 25, wherein the position of one of the slide and the indicator in relation to the guide and therefore in relation to the scale can be established using a sensor system.

Claim 26, an electrically conductive track with a homogeneous resistance provided along the guide; and a current collector of the slide which rests on the electrically conductive track, wherein a maximum voltage is applied over the length of the track between a starting position and a maximum position of the slide; wherein the current collector is configured so that a partial voltage may be tapped off across the current collector.

In claim 29, a control loop which forwards an actual position of the indicator to a controller as an input variable, wherein the controller compares a prespecified desired position with the actual position of the indicator to determine a control difference and the controller forwards the control difference to the drive as an output variable.

Noguchi discloses an analog display instrument, comprising: an indicator (3) configured to move in front of a scale (1); a guide (2) in the form of one of a straight line and a curve; and an electrically controllable drive (37, 38, etc. as shown in figure 2) configured to move the indicator along the guide; wherein the indicator is movable linearly along the guide in forward and backwards directions by the electrically controllable drive; wherein the indicator is positively guided along the guide and the indicator can be moved directly by the drive which is seated on the rail; and wherein the position of one of the rail and the indicator in relation to the guide and therefore in relation to the scale can be established using a sensor system (the sensor system being by means 41 and 42 in figure 1, or by means 51 and 52 in figure 5, see abstract).

Noguchi further discloses that electrical conductive tracks can be applied to the guide (figure 1) and along the guide (5 of figure 5) including a current collector which is configured so that a partial voltage may be tapped off (via 50) across the current collector on the indicator (3) in order to adjust the signal of the position applied to the driving motor in the movable indicator (3) to a measured signal (abstract); and, a control loop (the circuit of figure 1 which includes figure 3) which forwards an actual position of the indicator to a controller as an input variable, wherein the controller compares a prespecified desired position with the actual position of the

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indicator to determine a control difference and the controller forwards the control difference to the drive as an output variable (abstract).

Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention to add a sensor system, an electrically conductive track with homogenous resistance provided along the guide, a current collector configured for a partial voltage tap, and a control loop with a controller, as suggested by the teaches of Noguchi, in order to verify the location of the indicator and to adjust the indicator's position accordingly.

10. Claims 30 and 31 are rejected under 35 U.S.C. 103(a) as being unpatentable over Besnard et al. and Noguchi as applied to claims 25, 26 and 29 above, and further in view of US 6,741,184 to Miller et al.

Besnard et al. and Noguchi together teach all that is claimed as discussed in the above rejections of claims 25, 26 and 29 except for the limitations of claims 30 and 31.

With respect to claim 30, i.e., a circuit for adjusting a zero point, wherein the circuit performs an adjustment when the indicator is in a starting position: Miller et al. discloses a pointer position detection circuit can be adjusted at the zero point when the indicator is in a starting position (prior art teaching, column 1 lines 20-35) and teaches that a sensor and circuit (figure 3) can be used to determine the error between the actual sensed position and the former assumed position, and zeroing the motor from the calculated error (column 1 lines 47-55) for the purpose of accommodating results of acceleration, vibration, and drift over time of electronic components (column 1 lines 25-27). Therefore, it would have been obvious to one of ordinary

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skill in the art at the time of the invention to modify the instrument, taught by Besnard et al. and Noguchi, to include a circuit for adjusting a zero point wherein the adjustment is performed when the indicator is in the starting position, as suggested by the teachings of Miller et al., in order to compensate for errors and to improve the accuracy of the indicator over time.

With respect to claim 31, i.e., wherein the guide is composed of a conductive plastic provided with carbon: This limitation is only considered to be the use of "optimum" or "preferred" materials that a person having ordinary skill in the art at the time the invention was made using routine experimentation would have found obvious to provide to make the guide disclosed by Besnard et al and Noguchi since they are well known types of materials used to make conductive plastic and since it has been held to be a matter of obvious design choice and within the general skill of a worker in the art to select a known material on the basis of its suitability for the intended use of the invention. In re Leshen, 125 USPQ 416. In this case, carbon for better deformability, elasticity, compliance, corrosion resistance, etc. relative to a metal.

Allowable Subject Matter

11. Claims 16-24 would be allowable if rewritten to overcome the claim objections for claims 13 and 17 set forth in this Office Action and to include all of the limitations of the base claim and any intervening claims.

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12. Claims 27 and 28 would be allowable if rewritten to overcome the claim objections for claims 25 and 28 set forth in this Office Action and to include all of the limitations of the base claim and any intervening claims.

13. Claim 32 would be allowable if rewritten to overcome the claim objections for claims 29 and 32 set forth in this Office Action and to include all of the limitations of the base claim and any intervening claims.

14. As allowable subject matter has been indicated, applicant's reply must either comply with all formal requirements or specifically traverse each requirement not complied with. See 37 CFR 1.111(b) and MPEP § 707.07(a).

Conclusion

15. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. The prior art cited in PTO-892 and not mentioned above disclose related instruments or drives.

16. Any inquiry concerning this communication or earlier communications from the examiner should be directed to R. Alexander Smith whose telephone number is 571-272-2251. The examiner can normally be reached on Monday through Friday from 9:30-6:00.

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If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Jinhee Lee can be reached on 571-272-1977. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/R.A.Smith/

March 1, 2010

R. Alexander Smith
Primary Examiner, Art Unit 2841